

I CLAIM:

Sub B1

1. A method for forming an artificial reef comprising:
providing a plurality of substantially identical concrete modules

having opposed top and bottom surfaces containing projections and recesses of corresponding shape at corresponding locations in the opposed surfaces, providing through holes through each of the modules at defined locations with respect to the projections and recesses;

assembling the modules in a series of superimposed layers with projections of modules in one layer received in recesses of modules in an adjacent layer so that through holes in the modules of the adjacent layers are aligned in the direction through the layers to produce continuous through holes through the assembly; and

filling the continuous through holes with concrete to provide reinforced concrete columns bonded to the sides of the through holes, permanently joining assembly of modular units into an artificial reef formation.

Sub A

2. A method according to claim 1 wherein the through holes and the modules extend vertically through the projections and recesses of the modules.

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3. A method according to claim 1, wherein the through holes are laterally spaced at defined locations with respect to the locations of the projections and recesses on the opposed surfaces of the module.

4. A method according to claim 1 wherein end surfaces of the modules are formed with half through holes to form complete through holes when the adjacent end surfaces of two modules are placed in abutting relation.

5. A method according to claim 4 wherein the modules of adjacent layers are assembled in staggered relation with a through hole of a module in one layer being aligned with a through hole formed by half through holes in facing end surfaces of adjacent modules in an adjacent layer.

6. A method according to claim 1 wherein the through holes are centrally positioned in the projections and recesses of the modules.

7. A method according to claim 1 including inserting fiberglass reinforcing rods into the continuous through holes extending through the layers before filling the through holes with concrete.

8. A method according to claim 1 including forming laterally extending openings between adjacent modules in regions surrounding a through hole to permit concrete supplied to the continuous through hole to form lateral projections in a solidified concrete column.

9. A method according to claim 1 wherein the projections and recesses in each module have a frustoconical shape.

10. A method according to claim 1 wherein the projections and recesses in each module have a hemispherical shape.

Sub A

11. A module for use in assembling an artificial reef comprising:
a concrete block having top and bottom surfaces and side surfaces;
at least one through hole extending through the module from the
top surface to the bottom surface;
at least one projection extending away from one of the top and
bottom surfaces at a location defined with respect to the location of the through hole; and
at least one recess extending into the other of the top and bottom
surfaces at a location corresponding to that of the projection.

12. An artificial reef comprising:
successive superposed layers of laterally adjacent concrete
modules, each module having a projection received in a correspondingly shaped recess of
a module in an adjacent layer and having a through hole at a defined specific location
with respect to the projection and recess in the module so that the through holes of a
plurality of modules when assembled in successive superposed layers will provide an
continuous vertical through hole extending through the layers; and
a column of concrete filling each of the vertical through holes
extending through the layers.

13. An artificial reef according to claim 12, wherein adjacent modules
form a laterally extending opening from the continuous through hole to produce a lateral
projection on a concrete column formed in the continuous through hole.

Sub B